CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Approve Design Concept for Lockeford Street Storm Drainage Improvements; Approve Plans and Specifications and Authorize Advertisement for Bids for Lockeford Street Storm Drainage Improvements; and Adopt Resolution Authorizing the City Manager to Award or Reject the Contract up to $142,000 and Appropriate Funds

MEETING DATE: July 16, 2003

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council approve staff's recommendation for Storm Drainage Improvements to the Lockeford Street area to relieve the persistent storm drainage problems; approve plans and specifications and authorize advertisement for bids for Lockeford Street Storm Drainage Improvements; and adopt a resolution authorizing the City Manager to Award or Reject the Contract up to $142,000 and appropriate funds.

BACKGROUND INFORMATION: On February 19, 2003, City Council directed staff to prepare a computer-based storm drainage model for the B-2 Basin, as shown on Exhibit A. The computer model is a mathematical tool used to predict the performance of the storm drainage conveyance facilities.

Staff purchased the software, STORMCAD, by Haestad Methods, to model the storm drainage system. Modeling of the various basins in the City requires data input regarding pipe size, condition, elevation and alignment. This information is obtained from improvement plans with confirmation by field surveys. To date, model construction has been completed for the areas shown on Exhibit A. Lodi Lake pump station is an important element of staff's analysis, and additional work is required before recommendations can be presented to Council regarding enhanced operations at this facility.

The storm drainage model was calibrated and checked by Baumbach & Piazza, who has extensive experience in storm drainage modeling and City facilities. A 2-year storm event was applied to the model and results were generated to show the area prone to flooding (see Exhibit B). Most of the drainage facilities studied perform well under the 2-year storm event. The most severe flooding occurs at the storm drain trunk line along Holly Drive, Cross Street, and ending at Lockeford Street. This storm drain trunk line is undersized for the intensity of development in the area.

Staff has investigated several alternatives to relieve the flooding problem in the Lockeford Street area, using the computer model to select the best alternative. The following alternatives were considered:

1. Reroute the storm drainage from the Lockeford Street area westerly to the Mills Avenue storm drain trunk line (Exhibit C).

APPROVED: _____
H. Dixon Flynn -- City Manager

This alternative would provide a 2-year storm event level of protection (current City Design Standards) against street flooding in the Lockeford Street area. It involves installing new storm drain pipes and catch basins in Lockeford Street. The model has shown that the storm drainage trunk line in Mills Avenue has the excess capacity to accommodate this alternative. (Estimated Cost = $142,000)

2. Reroute the storm drainage from the Lockeford Street area southerly to the Elm Street storm drain trunk line (Exhibit D)This alternative would provide the same protection as Alternative 1. It involves installing new storm drain pipes and catch basins in Lockeford Street and Loma Drive. It also requires upsizing the existing storm drain pipe in Loma Drive. The model has shown that the storm drain trunk line in Elm Street is currently at capacity. The additional storm drainage from the Lockeford Street area to the Elm Street storm drain trunk line may cause additional flooding at the eastern ends of the trunk line. (Estimated Cost = $155,000)

3. Replace the entire storm drain trunk line in Holly Drive, Cross Street, and Lockeford Street with larger pipe (Exhibit E).

   This alternative would provide the highest level of flood protection in the Lockeford Street area and along the trunk line. It involves replacing all the downstream trunk line in the street and also in the easements of residents' side yards and backyards. (Estimated Cost = $500,000)

(All the alternatives mentioned above have assumed the Lodi Lake Pump Station is operating at its design capacity. The analysis of the existing pump station capacity is complicated, and staff is performing the analysis and will present the finding at a later date.)

Staff is recommending Alternative 1. This alternative has a lower cost but still provides a level of service comparable to the rest of the City. In order to expedite the Alternative 1 project and complete it before this winter, staff is recommending the Council approve the plans and specifications, advertisement for bids, and authorize the City Manager to award the contract for this project at this time.

FUNDING: Storm Drainage Impact Fees and Wastewater Operation Funds, total not to exceed $142,000.

Richard C. Prima, Jr.
Public Works Director

Prepared by Lyman Chang, Associate Civil Engineer
RCP/LC/pmf
Attachment
cc: Associate Civil Engineer, Chang
Street Superintendent
Water/Wastewater Superintendent

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PUBLIC WORKS DEPARTMENT

Exhibit A
Storm Drainage Model Area

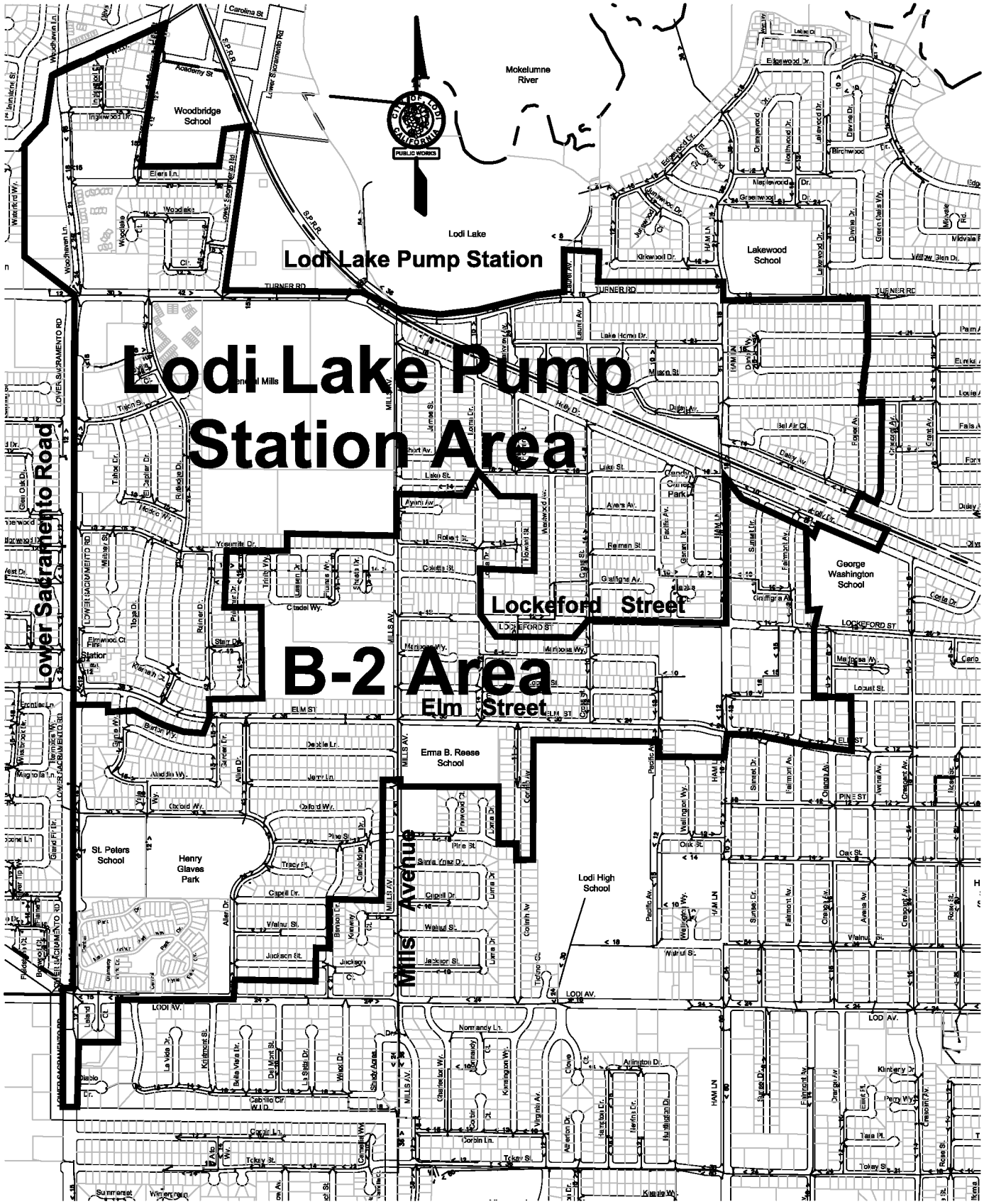

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Exhibit B
Potential Flooding Area
2-Year Storm Event

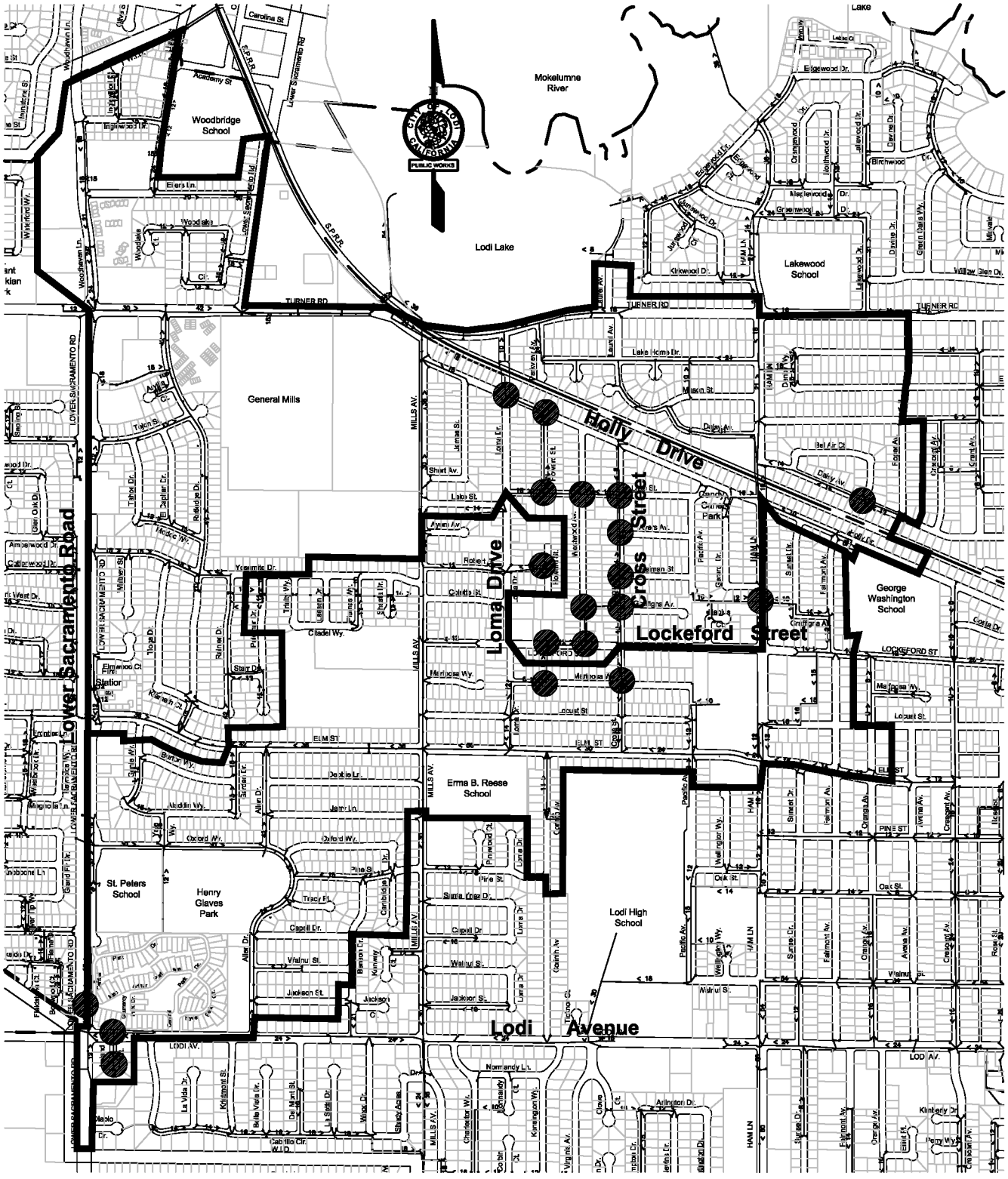

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Exhibit C
Storm Drainage Improvements
Alternative 1

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Exhibit D
Storm Drainage Improvements
Alternative 2

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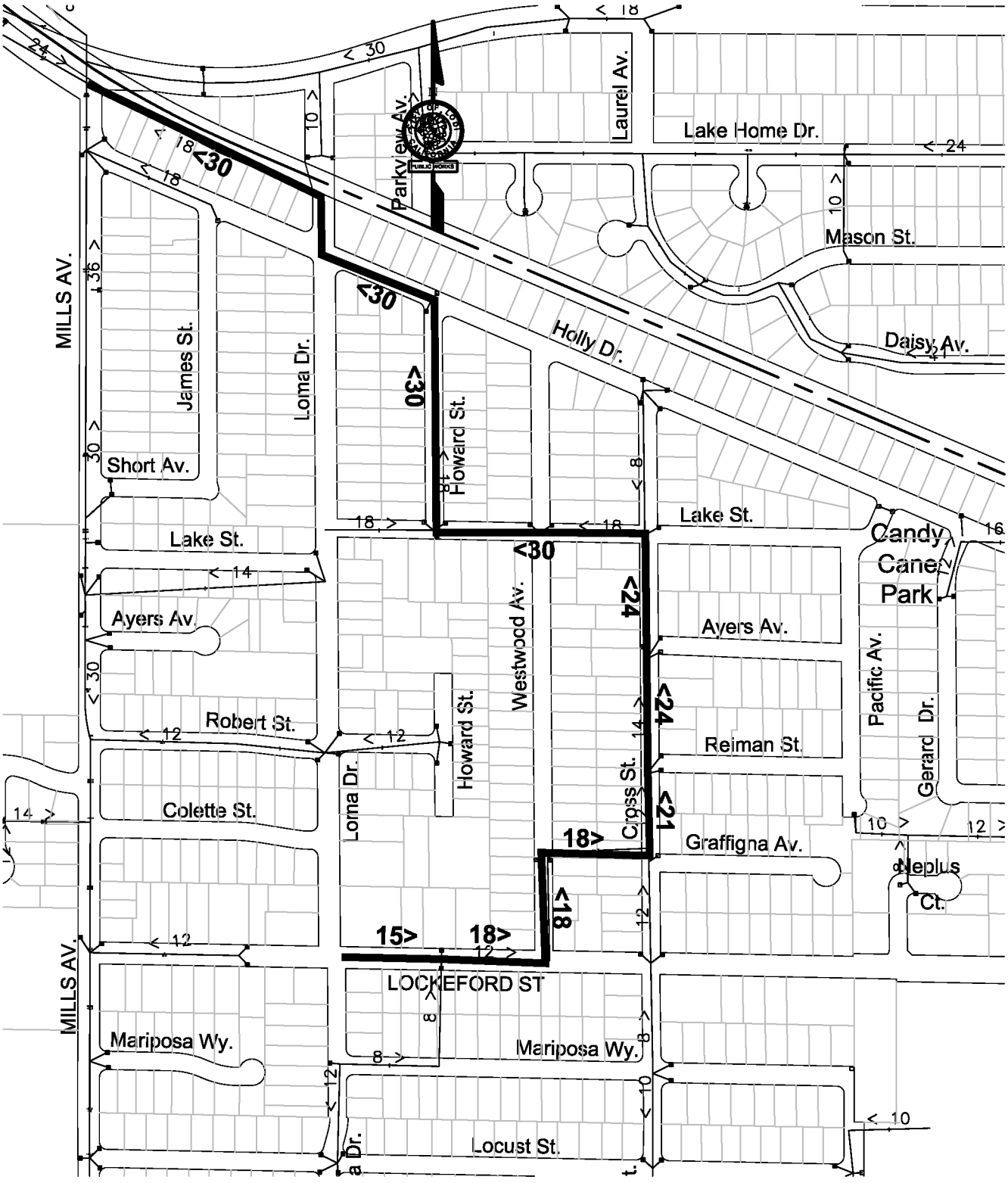
Exhibit E
Storm Drainage Improvements
Alternative 3



RESOLUTION NO. 2003-136

A RESOLUTION OF THE LODI CITY COUNCIL APPROVING DESIGN CONCEPT FOR LOCKEFORD STREET STORM DRAINAGE IMPROVEMENTS; APPROVING PLANS AND SPECIFICATIONS AND AUTHORIZINIG ADVERTISEMENT FOR BIDS; FURTHER AUTHORIZING THE CITY MANAGER TO AWARD OR REJECT THE CONTRACT UP TO $142,000.00, AND FURTHER APPROPRIATING FUNDS FOR THE PROJECT

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WHEREAS, the City Council directed staff to prepare a computer-based storm drainage model for the B-2 Basin (Lockeford Street area) due to severe flooding; and

WHEREAS, staff has found that most of the drainage facilities studied perform well under the two-year storm event, causing the most severe flooding at the storm drain trunk line along Holly Drive, Cross Street, and ending at Lockeford Street; and

WHEREAS, the storm drain trunk line is undersized for the intensity of development in the area; and

WHEREAS, staff has investigated several alternatives to relieve the persistent storm drainage problems in the Lockeford Street area, using a computer model to select the best alternative; and

WHEREAS, staff recommends rerouting the storm drainage from the Lockeford Street area westerly to the Mills Avenue storm drain trunk. This recommendation has a lower cost but still provides a level of service comparable to the rest of the City; and

WHEREAS, in order to expedite this project, staff recommends that the City Council approve the design concept for Lockeford Street Storm Drainage Improvements, approve the plans and specifications, authorize advertisement for bids, authorize the City Manager to award or reject the contract up to $142,000.00, and further appropriate funds for this project.

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby approve the design concept for Lockeford Street Storm Drainage Improvements, approves the plans and specifications and authorizes advertisement for bids, and further authorizes the City Manager to award or reject the contract up to $142,000.00; and

BE IT FURTHER RESOLVED that funds in the amount of $142,000.00 be appropriated from the Storm Drainage Impact Fees and Wastewater Operation Funds for this project.

Dated: July 16, 2003

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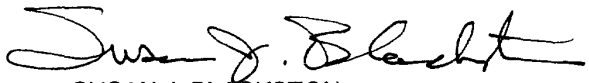
I hereby certify that Resolution No. 2003-136 was passed and adopted by the City Council of the City of Lodi in a regular meeting held July 16, 2003, by the following vote:

AYES: COUNCIL MEMBERS – Beckman, Hansen, Howard, and Land

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – Mayor Hitchcock

ABSTAIN: COUNCIL MEMBERS – None



SUSAN J. BLACKSTON
City Clerk